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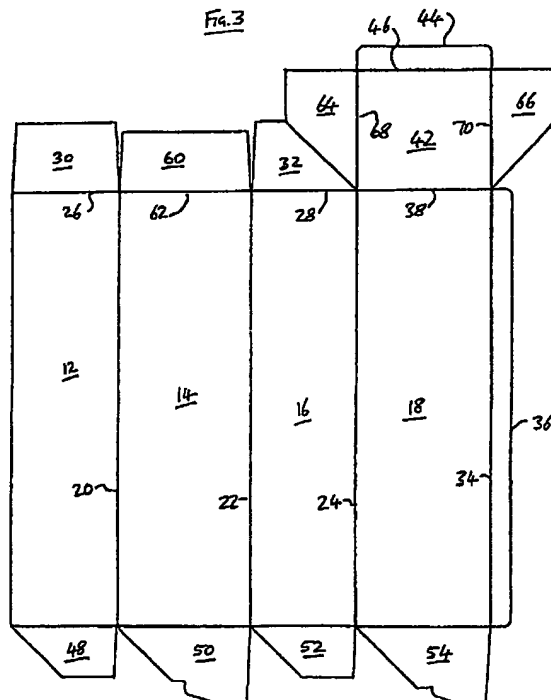
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GB 0980391 A GB 0947428 A GB 0891778 A
US 4163492 A US 3512697 A

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PR
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(54) Carton

(57) A blank for forming a carton with a tuck-in end comprises a tuck-in flap (42) and at least one end flap (30, 32). A side flap (64, 66) extends from the tuck in flap (42) and is connected to the tuck-in flap (42) through a fold line (68, 70). When the carton is erected, the side flap (64, 66) can be folded under the tuck-in flap (42) so that the edge of the tuck-in flap presents a fold line rather than a cut edge. In the same way, a body panel (14) opposite the body panel (18) to which the tuck-in flap (42) is connected may also be connected through a fold line (62) to a further flap (60) which can be folded into the carton so that the upper edge of that body panel (14) presents a fold line (62) rather than a cut edge.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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Fig. 1

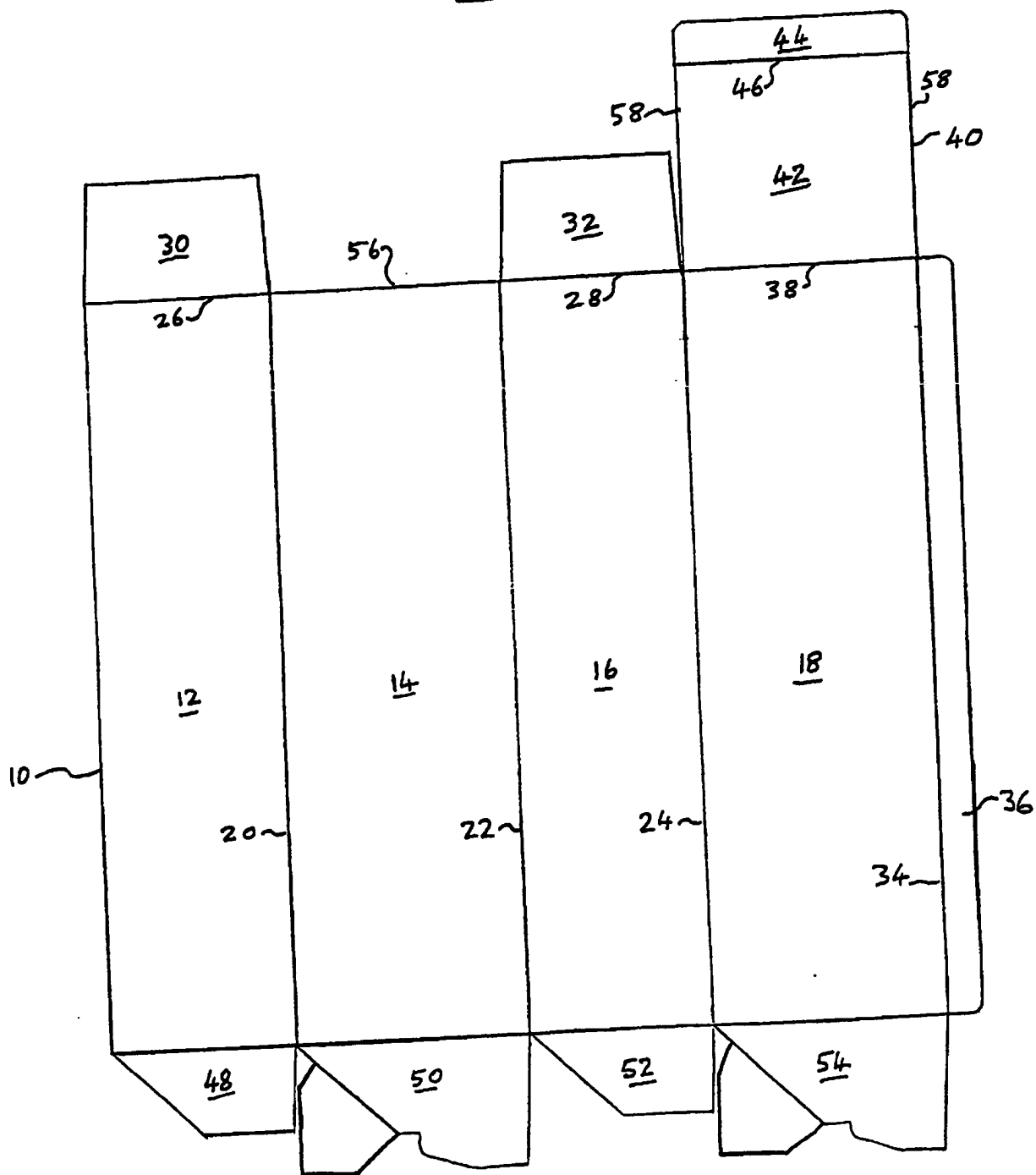


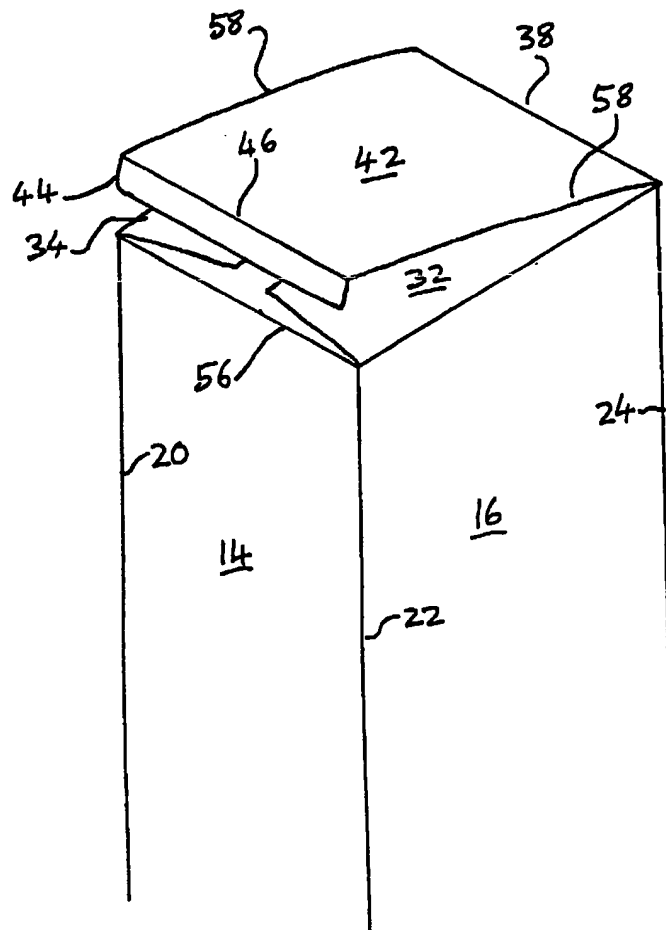
Fig. 2

Fig. 3

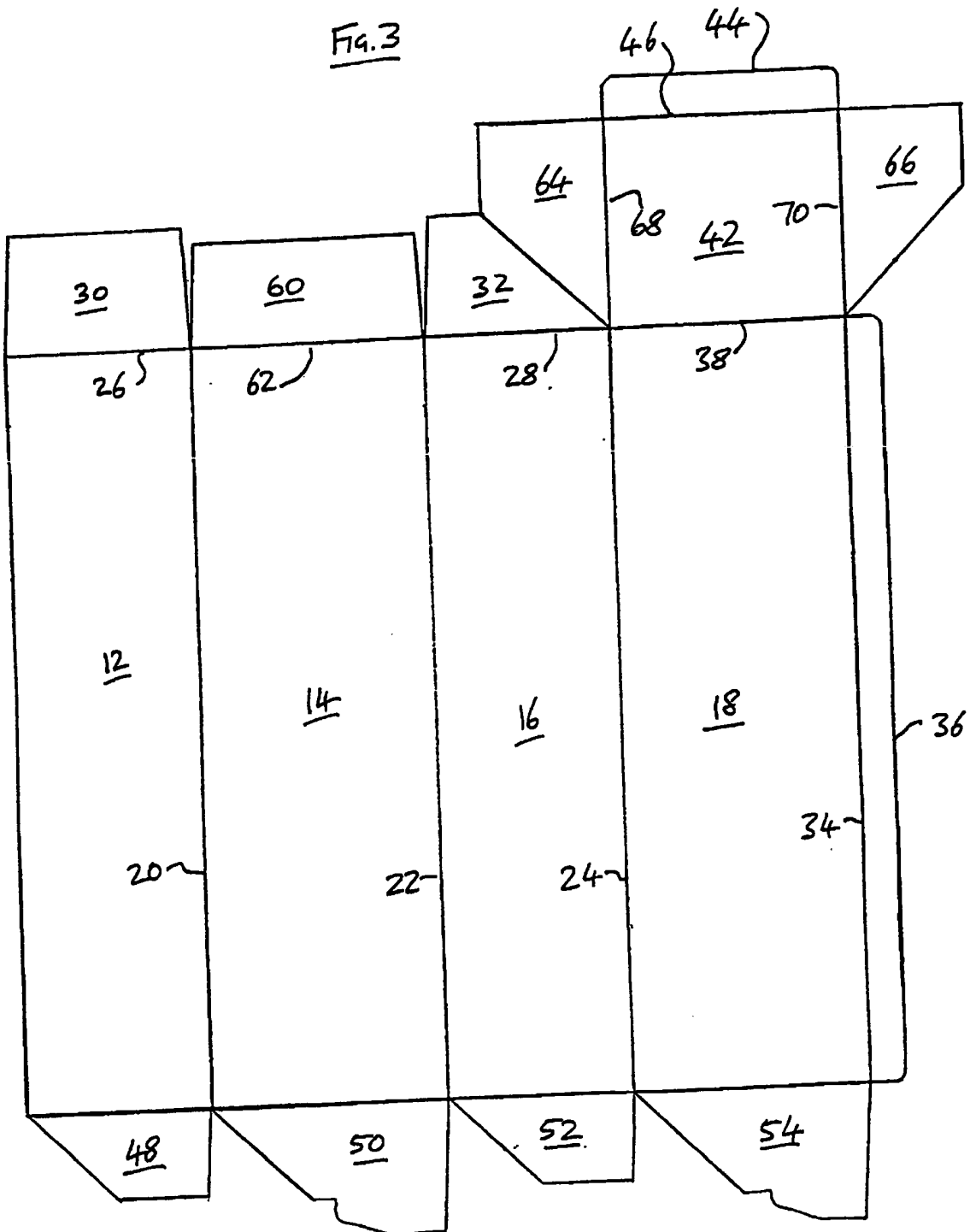
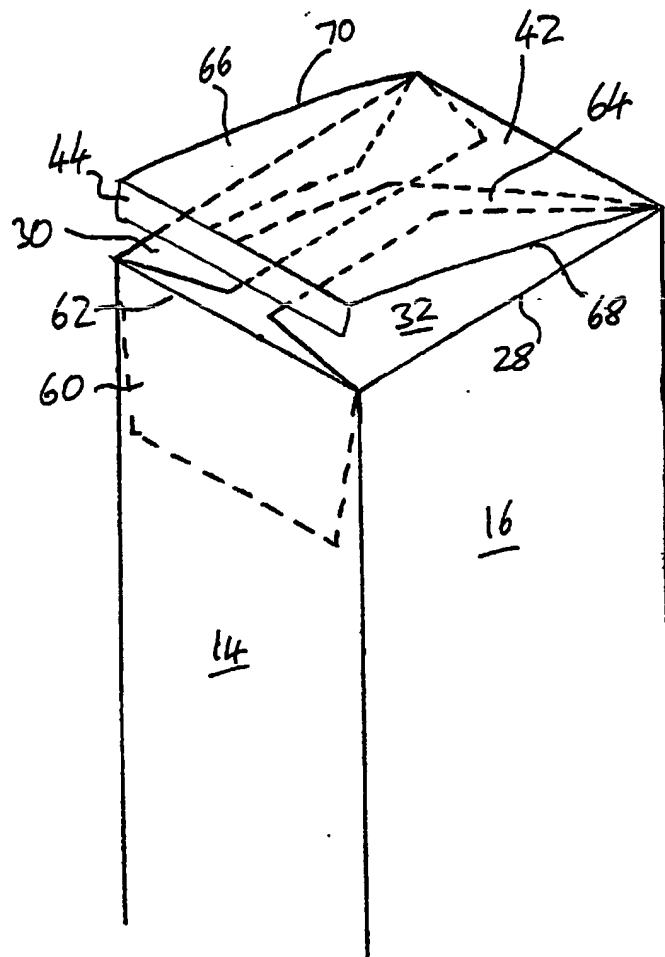


Fig. 4



A CARTON AND A BLANK

The invention relates to a carton and a blank.

5 Many cartons are known which are rectangular and have a tuck-in end. The tuck-in end comprises a tuck-in flap comprising a rectangular top panel connected through a fold line to a small flap which is tucked in and two rectangular or trapezoidal flaps connected to
10 the top edges of the body panels on either side of the body panel to which the top panel is connected. The blank for forming the carton may be printed. When the carton is erected and the tuck-in end closed, certain cut edges of the carton will be visible, for example
15 the top edge of the body panel opposite the body panel to which the main top panel is connected and the side edges of the main top panel. These cut edges may detract from the overall appearance of the carton, particularly where the carton has been printed in one
20 colour and the cut edges break the continuity of the colour over the carton.

According to one aspect of the invention there is provided a carton formed from a blank, the carton
25 including a tuck-in end which includes a tuck-in flap connected to a body panel of the carton, the carton also including an opposite flap connected through a

fold line to a body panel of the carton opposite the body panel to which the tuck-in flap is connected.

5 In this way, the cut line which would have been visible at the top of the body panel is replaced by a fold line.

10 Preferably, the opposite flap is arranged to be folded inside the carton. In this way a neat folded edge is presented at the top of the body panel. Preferably, the opposite flap is secured to the inner face of the opposite body panel of the carton. Preferably, the opposite flap extends along the entire end edge of the opposite body panel of the carton.

15

The tuck-in flap may also include a side flap connected through a fold line to a side edge thereof.

20 According to another aspect of the invention there is provided a carton formed from a blank, the carton including a tuck-in end comprising a tuck-in flap, the tuck-in flap including a side flap connected through a fold line to at least one side edge thereof.

25 In this way, the cut edge at each side of the tuck-in flap on the prior carton is replaced by a fold line.

Preferably, a side flap is connected to each side edge.

5 The or each side flap is preferably arranged to be folded under the tuck-in flap and preferably is secured to the inner face of the tuck-in flap. The or each side flap preferably extends along an entire side edge of the tuck-in flap.

10 According to a further aspect of the invention there is provided a blank for forming a carton according to either of the previous aspects of the invention.

15 According to another aspect of the invention there is provided a blank for forming a carton with a tuck-in end, the blank including a plurality of body panels and the tuck-in end comprising a tuck-in flap and at least one end flap, the tuck-in flap extending from one body panel and the or one end flap extending from
20 a second body panel next to the first body panel wherein a side flap extends from the tuck-in flap on the same side thereof as a second body panel and is connected to the tuck-in flap through a fold line.

25 Preferably, the side flap extends along the entire side edge of the tuck-in flap and preferably also the said end flap extends along the entire end edge of the

second body panel to which it is attached.

Preferably, the side flap and the said end flap are separated by a cut line. The cut line may extend to the edge of the body panels. The cut line may take any suitable form and in one embodiment is straight. In that case, the cut line preferably extends at an angle so as to substantially bisect the angle formed between the edge of the tuck-in flap to which the side flap is connected and the edge of the body panel to which said end flap is connected.

An embodiment of the invention will now be described by way of example and with reference to the accompanying drawings.

Fig. 1 is a plan view of a prior blank;

Fig. 2 is a perspective view of a carton formed from the prior blank of Fig. 1;

Fig. 3 is a blank according to the invention in a first embodiment; and,

Fig. 4 is a perspective view of a carton formed from the blank of Fig. 3.

The prior blank of Fig. 1 comprises four rectangular body panels 12,14,16,18 serially connected through fold lines 20,22,24. The body panels are alternately

relatively wide and slim. The slimmer body panels 12, 16 are each connected at their upper edges through fold lines 26,28 to end flaps 30,32. The end wider body panel 18 is connected at its outer edge through a fold line 34 to a narrow glue flap 36. The end wider body panel 18 is connected at its upper edge through a fold line 38 to a tuck-in flap 40 which comprises a rectangular top panel 42 and a flap 44 connected thereto through a fold line 46. The lower edges of the body panels 12,14,16,18 are connected to flaps 48,50,52,54 to form a crash-lock base. The crash-lock base flaps 48 to 54 are conventional and will not be described further.

Fig. 2 shows a rectangular carton formed from the blank of Fig. 1.

The main body panels 12,14,16,18 have been folded through 90° about the fold lines 20,22,24 to form a rectangular tube and secured by gluing of the glue flap 36 to the inner face of the end slimmer body panel 12. The crash lock base flaps 48,50,52,54 have been secured and crash locked in the known manner. The end flaps 30,32 have been folded through 90° across the tube opening about fold lines 26,28 and the top panel 42 has been folded across the top of the tube opening and the end flaps 30,32 about fold line

38.

It will be seen that, when the carton is closed, the upper edge 56 of the wider body panel 14 is visible together with the side edges 58 of the top panel 42. These edges are cut edges of the blank and therefore will contrast against the rest of the carton which may be printed.

Fig. 3 shows a blank according to the invention in one embodiment. The blank has features in common with the prior blank of Fig. 1 and only the differences from the blank of Fig. 1 will be described with the same reference numerals being used for common features.

The blank of Fig. 3 includes an opposite flap 60 which extends from the top edge of the wider main panel 14 through a fold line 62. The opposite flap 60 is about half the length of the top panel 42 and extends over the entire top edge of the wider main body panel 14.

To each side edge of the top panel 42 is connected a side flap 64, 66 through a fold line 68, 70. The upper edge of each side flap 64, 66 extends co-linearly with the fold line 46 which is parallel to the fold lines 26, 28, 38, 62. The edge of the side flap 64, 66 then turns downwards through 90° to extend parallel with

the fold lines 68,70 over about half the length of the fold lines 68,70 and then angles inwardly by 45° to meet the junction between the fold lines 68,70 and 28,38 and 24,34. In order to accommodate the side flap 68, the end flap 32 is slanted on the side adjacent the side flap 68.

In this way, the cut edges 58,56 of the prior carton are replaced by fold lines 62,68,70.

10

Fig. 4 shows the carton erected from the blank of Fig. 3. The opposite flap 60 has been folded about the fold line 62 into the tube formed by the main body panels 12,14,16,18 and secured to the inner face of the main body panel 14 to which it is connected. Similarly, the side flaps 64,66 have been folded inwards about the fold lines 68,70 to lie under the top panel 42 and they have been secured to the inner face of the top panel 42.

20

It will be seen that, when the carton is closed, no cut edges are visible at the tuck-in end. The top panel terminates in fold lines 38,68,46,70 and the main body panels 12,14,16,18 terminate upwardly at fold lines 26,62,28,38. As each fold line extends over the entire length of each edge, no cut edges are present.

25

CLAIMS

1. A carton formed from a blank, the carton including a tuck-in end which includes a tuck-in flap connected to a body panel of the carton, the carton also including an opposite flap connected through a fold line to a body panel of the carton opposite the body panel to which the tuck-in flap is connected.
2. A carton as claimed in claim 1, wherein the opposite flap is arranged to be folded inside the carton.
3. A carton as claimed in claim 2, wherein the opposite flap is secured to the inner face of the opposite body panel of the carton.
4. A carton as claimed in claim 1, 2 or 3, wherein the opposite flap extends along the entire end edge of the opposite body panel of the carton.
5. A carton as claimed in any preceding claim, wherein the tuck-in flap also includes a side flap connected through a fold line to a side edge thereof.
6. A carton formed from a blank, the carton including a tuck-in end comprising a tuck-in flap, the

tuck-in flap including a side flap connected through a fold line to at least one side edge thereof.

5 7. A carton as claimed in claim 5 or claim 6, wherein the or each side flap is arranged to be folded under the tuck-in flap.

10 8. A carton as claimed in claim 7, wherein the or each side flap is secured to the inner face of the tuck-in flap.

15 9. A carton as claimed in any of claims 5 to 8, wherein the or each side flap extends along an entire side edge of the tuck-in flap.

10. A carton as claimed in any of claims 5 to 9, wherein a side flap is connected to each side edge of the tuck-in flap.

20 11. A blank for forming a carton as claimed in any preceding claim.

25 12. A blank for forming a carton with a tuck-in end, the blank including a plurality of body panels and the tuck-in end comprising a tuck-in flap and at least one end flap, the tuck-in flap extending from one body panel and the or one end flap extending from

a second body panel next to the first body panel wherein a side flap extends from the tuck-in flap on the same side thereof as the second body panel and is connected to the tuck-in flap through a fold line.

5

13. A blank as claimed in claim 12, wherein the side flap extends along the entire side edge of the tuck-in flap.

10

14. A blank as claimed in claim 12 or claim 13, wherein the said end flap extends along the entire end edge of the second body panel to which it is attached.

15

15. A blank as claimed in claim 12, 13 or 14, wherein the side flap and the said end flap are separated by a cut line.

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16. A blank as claimed in claim 15, wherein the cut line extends to the edge of the body panels.

17. A blank as claimed in claim 15 or claim 16, wherein the cut line is straight.

25

18. A blank as claimed in claim 17, wherein the cut line extends at an angle so as to substantially bisect the angle formed between the edge of the tuck-in flap to which the side flap is connected and the

edge of the body panel to which said end flap is connected.

19. A blank substantially as described herein
5 with reference to Fig. 3 of the accompanying drawings.

20. A carton substantially as described herein
with reference to Fig. 4 of the accompanying drawings.

Patents Act 1977**Examiner's report to the Comptroller under Section 17
(The Search report)**Application number
GB 9318366.3**Relevant Technical Fields**(i) UK-CI (Ed.M) B8P (PC1B, PC1C, PC1X, PB1, PR, PEX,
PK3)

(ii) Int CI (Ed.5) B65D 5/02; 5/08; 5/10; 5/42

Search Examiner
MIKE HENDERSONDate of completion of Search
18 AUGUST 1994**Databases (see below)**(i) UK Patent Office collections of GB, EP, WO and US patent
specifications.

(ii) ONLINE DATABASE: WPI

Documents considered relevant
following a search in respect of
Claims :-
1-5, 7-11, 19, 20**Categories of documents**

- X: Document indicating lack of novelty or of inventive step. P: Document published on or after the declared priority date but before the filing date of the present application.
- Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A: Document indicating technological background and/or state of the art. &: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 980391	(THE NEW MERTON BOARD MILLS LTD) whole specification relevant	1, 4, 11
X	GB 947428	(EUREKA SPECIALTY PRINTING CO) whole specification relevant	1, 11
X	GB 891778	(ESSELTE FORPACKNING AB) whole specification relevant	1, 4, 11
X	US 4163492	(RELLA) whole specification relevant	1, 4, 11
X	US 3512697	(ROBINSON) whole specification relevant	1, 11

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